FOR RELEASE
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Remarks by Wayne Coy, Chairman
Federal Communications Commission
Panel Discussion before the
American College Public Relations Association
Washington Hotel, Washington, D. C.
2:30 p.m., Thursday, April 28, 1949

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As my contribution to this discussion of "Television in the Future of Higher Education", I will offer my views on these five questions:

What are the major problems of higher education?

How can television help?

What is the broadcaster's responsibility?

What is the educator's responsibility?

What is the status of television?

As to the first question regarding the major problems of higher education, even the layman now has a considerable appreciation of the burdens confronting that area of our educational system -- overcrowded buildings, the teacher shortage, the urgent need for adult education.

President Truman has recently emphasized that education is our first line of defense. We Americans today are being asked to take some long steps forward in our thinking on all sorts of domestic and international problems -- steps far in advance of anything we were prepared for in college even though we may have been graduated only a few years ago.

We are being asked to expand our thinking to a global basis. As we try to evaluate our new responsibilities, our leaders spur us on by pointing, not to a switch in the corner as the schoolmaster in the little red schoolhouse of yore, but to a sword of Damocles in the form of global catastrophe. In the good old days we used to think of education mostly as a means of getting ahead in the world. Today we see that education has -- or should have -- high survival value. Preparation for citizenship in the modern world calls for a broadened educational base.

Educational standards in the older professions are being raised. The demands of newer professions call for a modern educational approach.

In the face of this demand for more and better education, we must consider that the universities in three years from now will need 100,000 more teachers and 23,000 more administrators. Even so, the universities will not be accommodating all the young men and women capable of meeting the requirements for a four-year course for the reason that these young men and women will not have the money to pay for an education.

It is estimated that there will be a 40 per cent increase in elementary and high school enrollment by 1958.

Meanwhile, higher education is failing to live up to its responsibilities for adult education. Yet the President's Commission on Higher Education calls this field the potentially greatest service of the colleges and universities to democratic society.

"This state of affairs," the report states, "cannot be permitted to continue. The colleges and universities should elevate adult education to a position of equal importance with any of their functions. The principal obstacle to acceptance of the program, nonetheless, is the limited concept that higher education still holds of its role in a free and democratic society."

Clearly, the mechanics of higher learning must be modernized, must be expedited if our colleges and universities are to fulfill their true function in our modern society.

Now, how can television help?

The value of visual aids in education has been demonstrated so consistently that it is somewhat discouraging to note that better progress has not been made in this department. The most dramatic demonstration came during the last war when the military had to teach millions of men almost overnight. There was simply no time for the time-consuming, old-fashioned methods. The results were phenomenal.

In television we have the combined power of sight and sound to reach the mind with new facts. Each aids the other. A high degree of concentration is obtained. Because of its unique power to demonstrate, television is arousing the intense interest of advertisers. There is every indication that they will exploit this medium to the hilt to sell both goods and services. They will spend millions of dollars on this new medium which has already proved its ability to advertise, to demonstrate and sell. Surely, American educators cannot be less progressive in availing themselves of this electronic miracle.

Miss Dorothy Blackwell, assistant director of the audio-visual division of the St. Louis School System which has been working with KSD-TV, calls television "the shorthand method of learning -- the poor man's college."

In New York City all the school buildings under construction or planned will be equipped with television installations.

Television can open the classrooms of the schools to avenues of information from all over the nation and eventually to the entire world. We are rapidly building up to an undreamed-of new high in the immediate availability of informational and cultural service. The stimulating influence of well-planned television programming will be felt by every department of a university.

We are going to find that television can go a long way to correct one of the major weaknesses of our educational methods -- the failure to relate education to life.

In my opinion, television is going to stimulate a new interest in all other sources of information -- in the schools, in books, magazines, newspapers.

There are many unsolved problems in television but I can't see how there can be any doubt at all as to the educational potentialities of this medium.

I like the sentiment of the New York Times on this subject. Its editorial page said recently: "Television has come out of the barroom into the home. Now, as it enters the schools and colleges, let us make no small plans."

The responsibility of the broadcaster is clear. Television stations employ frequencies owned by all the people. They must be operated not merely for private gain but for the common benefit of the people, specifically for the public interest, convenience and necessity.

In the Communications Act of 1934, the Congress directed the Commission to "study the proposal that Congress by statute allocate fixed percentages of radio broadcasting facilities to particular types or kinds of non-profit activities."

The Commission in its report to Congress recommended that specific percentages not be reserved by statute, specifically on the ground that existing commercial stations were ready and willing to carry programs of non-profit organizations and that non-profit organizations would benefit thereby.

The report went on to say: "In order for non-profit organizations to obtain the maximum service possible, cooperation in good faith by the broadcasters is required. Such cooperation should, therefore, be under the direction and supervision of the Commission. . . . . It is our firm intention to obtain the fullest opportunities for expression."

The Commission has consistently maintained that licensees must be responsive to the needs and interests of the community, that they cannot surrender their program responsibilities to networks but must retain some measure of initiative in program making and serving community needs, and further, that broadcasting must be a medium of free expression.

Fourth question: What is the educator's responsibility?

With the need for a greater quality and quantity of higher education more urgent than ever before and with such a powerful mechanism as television at hand, the answer to this question is: Educators should make the fullest possible use of television. They should explore its possibilities without further delay. Then they should learn to use it. Education by television can be effective only if educators realize that they must adapt their techniques to the special demands of visual broadcasting.

Educators should work with the broadcasters to experiment and develop programs suitable for classroom use and other programs suitable for adult education in the home. And those adult education programs must be aired at a good listening time. Such adult education programs will not be expected to win the top Hooper ratings. But on the other hand, educators will not be doing the job if they try to bring Dark Age classroom methods to the mid-Twentieth Century medium of television. It does no good to broadcast into thin air. They must try to get some of the enthusiasm, the ingenuity and the drama of commercial programs into their video teaching. In this connection, the educator might echo the classic query of Rowland Hill: "Why should the Devil have all the good tunes?"

I applaud the statement of Dr. Isaiah Bowman, former President of Johns Hopkins University, regarding that University's science series over WMAR-TV. He said: "A university has a duty not only to its students but to a wide public in the United States. Television has given us another method of bringing education into the home -- the opportunity of expanding our program of general education to include interested persons of all ages."

I would like to see some of the better-financed universities start thinking seriously of building their own television stations. And that brings me to my final point -- the progress of television construction.

We have some 60 stations on the air in more than 30 cities, covering areas containing 40 per cent of the population of this country. Sixty more stations are under construction. More than 300 applications are pending. In another six or seven years we may have between 800 and 1000 stations. More than 1,500,000 sets have been produced. In two years from now that figure should go up to 6,000,000 and at the end of five years it is estimated that 18,000,000 sets will have been produced.

Electronic highways are being opened all over the land. The television waves will carry ever-increasing loads of program material to attract the eyes and the ears of the American people. How much of that program material will be of a constructive nature, calculated to inform and improve is a question that needs the most serious attention of American educators and American broadcasters without further delay.

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For Release
On Delivery

Address by Wayne Coy, Chairman
Federal Communications Commission
Before the 19th Institute for Education by Radio
Under the Auspices of
The Ohio State University
Deshler-Wallick Hotel, Columbus, Ohio
7:30 p.m.,(EST) Thursday,May 5, 1949

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In his invitation to me to participate in this panel on the future of broadcasting, Dr. Tyler said he wanted to limit the scope to the "next few years." For an educational scientist of Dr. Tyler's stature, that phrase is shockingly loose and inexact. So I am going to get specific and assume that he means at least five years -- or a quinquennium as we "scholars" say in Washington.

By limiting our discussion to the next five years, are we to assume that Dr. Tyler doubts the ability of us panel members to crystal gaze ten, twenty or thirty years into the future? Personally, as an old hand at crystal gazing, I much prefer making long-range predictions to short-range predictions. It takes that much longer to check up on you.

In any event, I wish to avail myself of the kind of escape clause that I observe is now being employed by some of our more prominent forecasters--employed, I believe, ever since last fall. That clause is something to the effect that the prediction is made on the assumption that the facts will be the same at the time of the occurrence of the event as at the time of prediction.

Now as to the future of the first item on your agenda -- AM broadcasting. Where will it be five years from now? Will it still be a great medium of mass communication or will it have dwindled to its "doom" within three years as predicted by 'Deac' Aylesworth, first President of the National Broadcasting Company?

Today we have nearly 2000 AM stations on the air -- more than twice as many as on VJ-Day. Moreover, many of the stations have far more power than they did before the war. Nearly 170 stations are under construction. More than 400 applications are pending before the Federal Communications Commission. And, in addition, applications for new stations are still coming in at the rate of about twenty a month.

Ninety-five per cent of American families -- practically every family -- own a receiving set. There is a set in one out of every four autos. The listeners have invested in this system of broadcasting more than four times as much as the broadcasters have invested in all their equipment and they continue to spend half again as much per year for new sets, tubes and repairs as the $500,000,000 the advertisers spend on the sponsorship of programs.

Statistics on financial returns for 1948 recently gathered by the Federal Communications Commission show that over-all the business of broadcasting was still quite profitable. The earnings on investment or sales compare favorably with those in any other industry.

Despite the fact that the number of stations on the air has more than doubled since before the war, the majority of the established stations -- that is, stations that had been on the air at least two years -- reported increased revenues in 1948.

And despite the fact that the number of stations had doubled, the proportion of these established stations losing money was lower than in the last year before the war.

In 1941, 22 per cent of the stations lost money. In 1948, 15 per cent of the stations in existence at least two years (i.e., licensed in 1946 or prior years) reported losses.

It is true that the profits of the established stations declined slightly in 1948. It is not difficult to find the reasons for such decline. They are increased labor costs and additional expenses, in many instances, required for the operation of the FM stations operated in conjunction with the AM stations. This latter item is nothing new to the broadcasters of America. They are continuously making investments in technological improvements for the betterment of their service.

So far I have been speaking of established stations -- stations that were on the air before 1947.

Some of the new stations, as is normal in broadcasting -- or any other business -- lost money during their first year or so of operation. From 1939 through 1941, for example, an average of 60 stations went on the air each year. On the average, half of these newcomers lost money in their first year.

In 1945, 62 per cent of the stations lost money in their first year of operation and in 1947, the comparable figure was 63 per cent.

Now look at the picture in 1948. Almost six times as many new stations were licensed in that year as were licensed during 1939-1941. But despite that six-fold increase in new stations, the proportion losing money in the first year of operation was 58 per cent or only a slightly higher per cent than in the pre-war years.

Five years from now when AM broadcasting feels the heavy impact of television, the financial returns will undoubtedly be considerably less. These risks should be very carefully weighed by anyone contemplating entering AM broadcasting and also should be carefully weighed by AM broadcasters planning their future.

My next assignment in this Nostradamus routine is FM.

We have today a nationwide FM service with almost as many stations on the air or under construction as there were AM stations on VJ-Day. There are more than 725 stations on the air and 160 under construction. In addition, we have more than 70 applications pending.

I think that that is encouraging. It is especially encouraging because those figures are quite realistic. They represent those that remain steadfast after a year in which approximately 100 applicants turned in their construction permits for various reasons. I think that most of the water has been squeezed out of those figures.

Moreover, three-fourths of the operating stations are using full power which means that they are getting far better coverage than most regional AM's.

However, the operators of FM stations have not done nearly enough to realize the full potentialities of this splendid new system of sound broadcasting. Too many are operating only the minimum number of hours per day, depriving the American people with FM receivers of some of the finest AM programs.

To overcome the lag in the growth of FM, I have suggested to the Commission that we now consider requiring the AM operators of FM stations to operate their FM the same number of hours as their AM. I have also suggested that the Commission consider requiring them to duplicate their full program structures so that the programs that have been developed in radio over more than a quarter of a century may thus be made available to the people over this better system of broadcasting.

My own thought is that those that do not have AM facilities should in the first year operate six hours a day as they are now required under our rules; the second year, eight hours; and the third year, full time.

I think FM will continue to grow.

I do not think it will be squeezed out by television.

If this nation will continue to require sound radio service (and I think it will) then there will be a demand for the best kind of sound service available. That best is FM.

There are many weak spots in our AM coverage today. Many suburban areas adjacent to the large metropolitan areas, as well as many rural areas, are either unserved or poorly served.

There are many small cities that do not have their own full time -- that is, nighttime as well as daytime -- radio station for the discussion of their local problems, for their local sports events, for local religious programs,

for the promotion of local talent.

Something is needed to fill those vacuums.

That something is FM. The overwhelming majority of American AM radio stations, excluding the 56 clear channel stations, could serve larger areas, could serve those areas with better signals and could provide service more days and more hours out of the year with FM.

Millions of people can be reached by an adequate signal only with FM. Those millions are consumers -- consumers that it is becoming increasingly important for advertisers to reach as the tempo of American merchandising is stepped up.

What is needed is circulation. Circulation cannot be had by magic. Service -- and only good service -- will bring it about.

Now what will the next five years bring in television?

My own belief is that five years from tonight television will be the dominant medium of broadcasting.

Five years from tonight most Americans will be getting most of their broadcast information, education and entertainment from television.

Five years from tonight sound broadcasting, although much improved in technical quality because of the increased use of FM and much extended in coverage because of the addition of both AM and FM stations, will be attracting less of the listeners' attention especially during the evening hours, will be attracting less of the advertisers' dollars, will be secondary to television.

The skyrocket progress that has marked television during the past two years will be progressively accelerated.

I concur in estimates of the manufacturing industry that five years from tonight forty to fifty per cent of the homes in America will have television receivers.

And we know that television attracts more audience per set than does sound radio.

We also know that even today the listener gives more attention to his television set than he does to his radio receiver. That amount of attention should increase as programs improve in quality and quantity.

Today we have 1,500,000 television sets in use. It now appears that by the end of the year there may be 3,000,000.

Today we have 60 stations on the air and as many more under construction.

The removal of four bottlenecks will speed television's growth during the next five years.

The first bottleneck is the Federal Communications Commission's freeze on the granting of permits for new construction. That has been in effect for some seven months and will perhaps be in effect for another three or four months. I assume this audience is acquainted with the interference problems that prompted this freeze. More than 300 applications are held up by the freeze.

I must confess to an excess of optimism with respect to the time required to revise the Standards of Good Engineering Practice for Television. The time required to analyze the data presently available from the operations of television stations in the VHF band and particularly the time required for engineers to agree on its meaning has been surprisingly long. While the freeze will be extended beyond the time that had been originally anticipated, I am quite sure that television service will be much improved because of the very careful scrutiny given the data and the sound basis provided for the revision of Television Engineering Standards.

The second bottleneck is the limitation of the present 12 television channels in the Very High Frequency Band. Many rural areas and even some important metropolitan areas could not be served if we were to restrict television to this present band.

Therefore, we are now studying methods of utilizing a higher band in the spectrum -- the Ultra High Frequency Band. We hope to gain the needed additional channels in that band.

Five years from tonight I expect to see 600 to 800 stations on the air. That will mean that five years from tonight television service will be available to the overwhelming majority of the people of the United States.

The third bottleneck is scarcity of networking facilities. This is being remedied rapidly. As you know, coaxial cable and microwave relay connect cities as far north as Boston and as far south as Richmond. A coaxial cable has been in operation between the East Coast and St. Louis since January. Two more westward channels have just been made available on this cable. Now a microwave system is being constructed between New York and Chicago. Next year it will be extended to Des Moines. Next year also, a coaxial cable will be run from Des Moines to Minneapolis and St. Paul.

The new microwave relay that is now being built between New York and Chicago will have 31 intermediate stations along the route. Between Philadelphia and Pittsburgh the concrete towers will be placed on mountain tops and will be about 60 feet high. On the flat land of Ohio and Indiana the towers will be from 150 to 200 feet high.

A coaxial cable for television will link Toledo and Dayton and will tie into microwave relays linking Columbus and Cincinnati in October.

I expect to see the West Coast linked with the East Coast by a combination of microwave relay and by coaxial cable in another two years.

Five years from now, I am sure that networking facilities will be so generally available that they will no longer constitute a bottleneck.

A fourth bottleneck is the huge cost of station construction and operation. The cost of constructing a metropolitan television station runs from $200,000 to $1,000,000. Figures reported to the Federal Communications Commission reveal that the average operating cost of 14 stations that were on the air for all of 1948 was $538,000. And none of those stations were on the air full time. They were operating only from 10 to 50 hours a week.

Many radio broadcasters who ought to be television entrepreneurs cannot afford that kind of money, and their thinking about television is controlled by the prospect of such expenditures. I think television can be more widely developed in the next few years by getting away from that carriage trade concept. Cities and towns outside the 140 metropolitan areas could be served by a "secondary" station operating with minimum staff and equipment, obtaining its programs from a metropolitan station. It would be in effect a repeater station.

Cities and towns between the secondary station and the metropolitan station could tap the connecting circuit.

Other small cities and towns could pick up programs from the secondary stations. This would be similar to our railroad systems. These stations would of course be expected to work toward the day when they can provide more and more local service -- but that could be a gradual process geared to the economics of the situation.

I want to make it clear that my thoughts on the subject of secondary stations are my own views and do not reflect any conclusion reached by the Commission. Nor has such a plan yet been considered by the Commission. It is my hope that my suggestions will encourage all interested parties to study this method of expanding television coverage.

All four of these bottlenecks will be smashed, I am confident, within the next five years.

As to advertising revenues for television, I do not hear of any trepidation on that account. Television is proving itself as an unsurpassed advertising, demonstrating, selling medium. It is estimated that advertisers will spend $25,000,000 on television this year. There are now around 1500 television advertisers. Last year more than 40 per cent of the advertisers using networking television were not radio advertisers.

Last year, with the medium still in its early infancy, television in the city of Philadelphia took 9-1/4 per cent of the total broadcasting revenue. In New York it took 8.2 per cent, in Washington 7.7 per cent and in Baltimore 7-1/2 per cent.

I do not want to imply that the revenue of the television stations in the cities I have just named came from aural radio exclusively. As I indicated, 40 per cent of the advertisers using network television last year were not radio advertisers. Whether that percentage is the same today or not is of no real significance. Certainly some of the money now going into television -- and a large amount of it -- comes from advertisers not now using radio. More than that, I am sure that many advertisers now using television have increased their advertising appropriations to cover the expense of this new media. But we cannot be blind to the fact that some of the money going into television advertising has come from radio broadcasting. Yet radio broadcasting revenues continue to support the present large losses in television operation and will continue to support those losses in many instances for some months.

Radio broadcasting faces not only the loss of some of its revenue to television, but it may face a more serious consequence as a result of television. All of the surveys show that nighttime radio loses audience as television set circulation is increased in an area. At the present time the loss is not serious although it is significant in terms of the listening habits of people. This developing situation is a challenge to those who operate sound broadcasting stations. It seems to me to indicate that there will be a very considerable re-adjustment of nighttime radio programming within the next five years and a more drastic revision of it in the following years as television circulation reaches sizable proportions. It likewise indicates that there will be a greater emphasis on daytime radio than there has been in the more recent years.

I do not believe that American radio broadcasters will take any loss of audience to this new media of television without vigorous efforts to make their programming more attractive in an effort to hold their audience or a reasonably large part of it. In fact, it seems reasonable to me to expect that they will intensify their studies of their community needs and direct their revitalized programming at meeting those needs and thus try to build up even more loyal audience than they have had heretofore. It does seem to me that television will inevitably be the dominant medium in the electronic field, but given imaginative leadership, aural radio broadcasting can and will serve a most important function in our national life.

The last subject on my assignment here for tonight is facsimile. The trend in this field now is away from simplexing and towards multiplexing so that the printed material can be sent over the receiver simultaneously with voice or music. This means that an FM station does not have to interrupt its sound programs in order to broadcast its facsimile material.

The idea of facsimile with its promise of an electronic newspaper is an intriguing one and I am glad to observe that some stations are continuing to work on the development of the medium. Much more experience is apparently needed before we estimate the future of this art of radio printing.

I fully expect that the ingenuity which flows from a competitive entrepreneur system will result in a development flowing from present experimentation with facsimile which will provide for the commercial development of this electronic printing machine. Likewise, it seems to me that here is a field in which you people interested in education by radio would want to interest yourselves. It seems to me that here you have a feasible method for the distribution of materials needed in any program involved in teaching by radio.

As I understand it, I am not expected to comment on educational broadcasting. That is being left to the experts. However, since I have the platform amid so many educators, I want to take a moment to discuss the progress of station construction by educational institutions.

Four years after the Commission allocated 20 FM channels for non-commercial educational broadcasting, we find that only 30 schools or school systems have such stations on the air, while only 20 others have them under construction. We at the Commission are frankly concerned that faster progress is not being made. I feel compelled to utter the warning you have heard so often before concerning the value of these frequencies and I urge you not to make the same mistake education made years ago when it abdicated its position in standard broadcasting.

The low power non-commercial FM educational service authorized by the Commission last year seems to be filling a real need. Six of those stations are under construction while eleven more have been applied for.

I suggest that you investigate the possibilities of these low power stations for your schools. They should be an excellent stepping stone into the higher powered stations that you need to serve the thousands of persons who are waiting to be served.

In addition, as you know, some 100 low power campus stations in the standard broadcast band are now in operation. The Commission has issued proposed new rules to govern these stations and has asked for comments to be submitted by June 1. The Commission now proposes to consider licensing these stations. Most of the stations, while commercial, are non-profit enterprises. Your comments on the terms of such licensing procedures will be welcomed.

In conclusion, I wish to express my appreciation to all those who through the past 19 years have labored so diligently and so brilliantly to build this Institute for Education by Radio up to its present impressive eminence.

All of you who have contributed to its growth since its inception in 1940 may well feel proud that you have created here the world's foremost forum for the study of broadcasting as an educational and cultural medium.

There is urgent need for the expert, professional, free and democratic discussion that prevails at these Institute meetings.

I sincerely hope that your enthusiasm and your faith will not fail you and that you will continue your magnificent contributions to American education and to American broadcasting.

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Address by Wayne Coy, Chairman
Federal Communications Commission
Before the Rotary Club of New York
Commodore Hotel
1:00 p.m., Thursday, April 7, 1949

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"THE STAKE OF AMERICAN BUSINESS
IN OUR COMMUNICATIONS SYSTEMS"

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You Rotarians must be a very happy, stout-hearted lot of people. You have not only the capacity to take the worries of your own business profession in your stride -- you have the additional fortitude to assemble here once a week and listen to someone else's troubles.

Next to taking care of crippled children, this is probably the kindest thing you Rotarians do. I know I am going to feel a lot better after I have unburdened myself to you today.

I have found out that the way Rotary gets a speaker is to do it by indirection. They have him approached by a member who knows him or is in the same line. They had me approached by a friend whom we shall call "Bill." Perhaps "friend" is too strong a term. After all, he is one of those fellows we regulate -- or try to regulate. He is classified as a radio broadcaster. When the give-away programs total $10,000,000 annually, I suggest that Rotary reclassify all broadcasters as philanthropists. But he is not too bad a fellow at that!

Since this Bill is responsible for my being here, he has been anxious that I make a good impression. He has been giving me a lot of suggestions. "Don't make your speech too technical," he said, "or the members of the club will go to sleep."

"Also," he admonished, "be sure to tell them some funny stories. Rotarians like a good laugh."

Well, I have been Chairman of the Federal Communications Commission for about a year and a half and a lot of things have happened to me in that time but none of them have been funny. I like a good laugh as well as anyone, but you won't find it at the Federal Communications Commission.

Oh, there have been some laughs during some of the speeches I have made. But those speeches were made to members of the industries that the Federal Communications Commission regulates. And you have no idea how easy it is for a man to get laughs from a group when he happens to be the Chairman of the government agency that regulates them. Even the faintest sign that he might be a human being is good clean fun to them.

His feeblest wheezes bring down the house. You would think he was a combination of Charlie McCarthy, Milton Berle and Schnozzle Durante.

And sometimes they even laugh when I'm in earnest.

I am going to speak today on "The Stake of American Business In Our Communications Systems." By that I mean electrical communications because, of course, there are other important means of communication.

Today when our interests have spread around the globe, and when our need to communicate is greater than ever, the efficacy of our communications systems assumes prime importance. I don't think I need to labor that point with this audience.

Because broadcasting is such a glamorous affair and gets so much publicity, a lot of people think that it is the sole concern of the Federal Communications Commission. Actually, a large part of our energies is devoted to the regulation of such common carriers as the telephone and telegraph companies operating by landline, ocean cable, and radio; the regulation of radio systems used by the police, aviation, ships at sea, railroads, busses, taxicabs and public utility companies; the regulation of radar and radio heating and many other new uses of radio.

When Congress created the Federal Communications Commission in 1934, it stated its major goal was to be "to make available so far as possible, to all the people of the United States a rapid, efficient, nationwide and world-wide wire and radio communication service with adequate facilities at reasonable charges."

I will discuss first that popular medium of communication -- the telephone. I will confine myself mostly to the Bell System which handles 90% of the telephone business.

The Bell System is the largest corporate system in the world. The System includes four elements:

(1) Twenty operating telephone companies;

(2) The Bell Laboratories at Murray Hill, New Jersey, the largest fully-integrated industrial laboratory in the world;

(3) The Western Electric Company, which manufactures and purchases equipment and supplies for the System; and

(4) The American Telephone and Telegraph Company. The A.T. & T., at the top of the heap, is the parent holding company. It functions as a general staff to assist the operating companies and it furnishes interstate long distance telephone service and other interstate services through its Long Lines Department.

This System serves 32,000,000 telephones -- 80% of all the telephones in this country.

Bell is the world's largest private employer of labor -- employing 660,000 persons. That is more than one-fourth as many civilians as are employed by all the agencies of the United States Government.

It owns 9,000 patents.

It has 765,000 stockholders -- more stockholders than any other corporation in the world.

Its book cost of telephone plant is almost $9,000,000,000.

It has an annual income of more than $2,500,000,000.

You can pick up your telephone and talk to 95% of all the other telephones around the globe. You can telephone your friend or associate on a liner in the middle of the ocean. You can talk to him as he whizzes through the country in his automobile; while he is riding on a train and while he is in the air.

And this is not the end of the versatile Bell System's services.

It also uses its wires to reproduce typewritten messages on 40,000 teletypewriters from coast to coast.

It sends photographs over those wires to newspapers.

Over its wires, the Bell System sends radio and television programs from the network studios to affiliated stations.

Please don't misunderstand me. I am not selling stock in the Bell System. I am just peddling the problems of a bureaucrat.

In the past decade the toll business of the company has more than doubled.

The average daily telephone conversations increased from 74,000,000 to 125,000,000.

The total annual operating revenues of the Bell System increased during the past decade from $1,100,000,000 to $2,600,000,000 -- an increase of 135%. Capital invested in the System increased 85%. At the same time operating costs including taxes went up 165%.

The company is at present engaged in a $5,000,000,000 expansion program which is over half completed.

As one step in its regulatory responsibility, the Federal Communications Commission studies and passes on plans for the extension or curtailment of interstate toll service or facilities.

We must consider whether service is being provided where it is most needed or if it is going instead to the most profitable areas. We must consider if uneconomic or improvident expansion is being undertaken. We must consider the comparative efficiency and economy of microwave radio relay systems in place of wire systems. We must consider the lag in telephone service to the rural areas.

American business pays most of the $500,000,000 collected by the Bell System for interstate and international telephone calls. That is the phase of the business that is primarily under the Commission's jurisdiction and I will present some of the problems involved in deciding the reasonableness of these charges.

To do this we must determine investment figures properly to be related to these services. We must look at the soundness of the depreciation practices. The depreciation expense claimed by the Bell System amounts to $275,000,000 a year. You can see that even a slight reduction in depreciation rates saves users millions of dollars a year. Its total depreciation reserve is $2,500,000,000.

We must study the reasonableness of inter-company payments within the Bell System, including the license contract payments.

We must study the reasonableness of the prices that Western Electric charges for equipment sold to affiliated Bell companies. These sales total a billion dollars a year and again, even a slight reduction in prices can mean savings of millions to the users.

Despite the scope and complexity of this regulatory responsibility, I am glad to be able to tell you that the Federal Communications Commission has been successful in obtaining some substantial reductions in the interstate and international telephone rates.

We owe our success largely to the wealth of information about the intricate, labyrinthian ramifications of the system obtained in a special investigation in the latter part of the Thirties.

The Federal Communications Commission in the past thirteen years has saved the American public a total of more than $1,500,000,000 on its telephone bills.

And those savings are continuing today at the rate of $300,000,000 a year.

During the period these rate reductions have been going into effect, the number of conversations in the categories of service affected has increased fourfold.

Thirty years ago a three-minute station-to-station call from New York to San Francisco cost you $16.50. Fifteen years later when the Federal Communications Commission was established, the charge had dropped to $9.00 -- a drop of 45%. Today it is $2.50 -- a drop of another 72%.

Now, the American thesis is free competition. Competition, however, has real limitations in modern telephone communications. We have therefore established the principle of public regulation. The greater the scope of the monopoly, the greater is the responsibility of the agency to see that the public interest is served.

There is no real competition within the telephone industry in the United States. Such competition as there is comes from other forms of communication -- Western Union (the recorded message) and the mails. Both of the media competing with the telephone business are monopolies -- one privately-owned and operated and the other governmentally-owned and operated.

Five years ago Western Union absorbed the Postal Telegraph System. The hope of the Federal Communications Commission at the time it approved this merger was that one strong, efficient company would result.

Those hopes were too optimistic.

The telegraph system has fallen far behind the fast pace set by the telephone. Both these media of communications increased sharply during the war. After the war the volume of telephone traffic continued to go up. Since the end of the war, air mail traffic is also on the upgrade. But telegraph traffic has declined.

Western Union, in an effort to improve its financial situation, has sought rate increases which have been granted in large part.

About two and a half years ago, in response to an urgent plea from the company, the Commission granted it a rate increase of 10% -- six months later it granted an additional 10%. Certain other increases were granted. The company has also sought to effect economies in operations.

Today, two years later, despite those rate increases, Western Union is operating at a substantial loss.

In hundreds of small towns the telegraph office has become a thing of the past -- like the cigar store Indian. If there is any service at all, it is provided by the local druggist, restaurant keeper or merchant who relays your message to an office in a larger town by teletypewriter or telephone.

The company pins its hopes for better service on the effectiveness of a $72,000,000 modernization program. This includes the replacement of wire plant by wire circuits leased from the Bell System and by microwave radio relay systems, the use of automatic reperforator switching operations and the use of "telefax" units and "telecars" to improve the terminal handling of telegrams.

Certainly Western Union cannot continue to operate with substantial losses. More rapid progress in its modernization program and a rational rate structure competitive with the telephone business are imperative.

Your stake as American businessmen in this problem is in having available a good domestic telegraph service at proper rates.

In the field of international communications the competition is between radiotelephone, radiotelegraph, cable-telegraph and air mail.

Foreign trade is reviving. The administration is committed to an aggressive campaign for the expansion of that trade. American business has an increasingly important stake in our international communications.

We are served by a radiotelephone system under the Bell System ownership that connects with 80 foreign nations. But the overwhelming amount of our international telecommunications traffic is by cable and radiotelegraph.

Our international telegraph service is on a competitive basis. Five American companies operate ocean cables. Six American companies operate radio-telegraph circuits.

This international business has also been having financial difficulties.

In an effort to relieve the carriers financially, the Federal Communications Commission in the past two years has granted them three rate increases. Even with these increases, the over-all rates, however, are lower than they were ten years ago.

To improve our international service, various authorities have suggested that monopoly be substituted for competition in this field. They argue that a merger of all the carriers would eliminate wasteful duplication and make for more efficient operation.

The Federal Communications Commission and other government agencies have in past years supported proposals for legislation that would provide for voluntary merger in this field. The Congress has not approved any such proposal. Serious consideration has not been given the problem by the Congress for some four years.

I assure you that there is no easy answer to the question. It is most difficult to get legislative authority for mergers and monopolies. It is extremely difficult to get executive support and public support for such recommendations. Obviously such policies can be adopted only if there is no other way to serve the public interest.

For the successful operation of an international communication system, we require the cooperation of the sovereign nations controlling foreign terminals. These arrangements call for diplomatic relations as well as exercise of regulatory authority. The International Telecommunication Union is one of the oldest international bodies.

In May the International Telecommunication Union will hold a general telegraph and telephone conference in Paris -- the first since 1938, to review the developments since that date and to revise its regulations. Some sixty sovereignties will be represented.

The United States Delegation goes to this conference with the hope that agreements may be reached that will benefit our nation -- its telegraph users and its telegraph industry.

Since the war, American industry has turned to short wave radio on an unprecedented scale to speed up its operations. Electric light, gas and power utility companies are operating their own radio systems to dispatch crews from job to job, thereby speeding service and cutting operating costs. Railroads, streetcars, subways, busses, taxicabs, petroleum pipe line crews transmit orders by radio.

During the record-breaking storms of the past winter when thousands of miles of telephone lines were down, and no other means of communication were available, radio enabled the utility companies to mobilize their crews to repair the damages to their facilities.

Industry makes rubber mattresses, tires, plastic radio cabinets, phonograph records and plywood pianos, and hardens metals by radio heat. Restaurants are cooking steaks with radio heat.

Radio is being sought for every service from the cradle to the grave. We have an application on hand at the Commission from a diaper delivery service and another from an undertaking establishment.

More than 700 vessels on the seas, on the Great Lakes and the Mississippi River, now avoid dangers and delays of fog or darkness by radar.

All these uses of radio frequencies must be authorized by the Federal Communications Commission.

In conclusion, I want to review the progress of a system of communication on which American business spent more than $500,000,000 for advertising last year -- radio broadcasting.

Since the close of the war, the number of stations over which you can reach the American home with your advertising message has almost tripled. And the end is not yet in sight. In another two or three years the number will have quadrupled.

This means that as we return to a buyer's market and as new products must be introduced to the public, business will have at hand an advertising medium that is keeping pace with its needs.

Now a revolutionary new type of broadcasting is coming to the fore, a type that is enabling business for the first time to show its goods and services on a screen in the family living room.

Television is the most powerful and most versatile medium ever developed for the communication of ideas, for the dissemination of information, education, culture and entertainment.

By speeding our industrial processes, by facilitating our merchandising methods, by stimulating and informing the mass of our population, this electronic miracle will raise our American standard of living to new heights.

Television will be your most compelling advertising tool.

By television you can not only display your goods and services under the most favorable circumstances before an attentive family circle, you can also demonstrate them. You can employ drama, charts, graphs, animated cartoons, paintings, motion pictures, music, narration and sound effects.

Television is becoming an outstanding success story of American business. Four years ago we had only seven television stations on the air.

Today we have sixty on the air and as many more are under construction.

Already the American people have taken this new art to their heart with such enthusiasm that they have dug down in their pockets and purchased more than a half a billion dollars' worth of sets. They are, in fact, buying the sets as fast as they roll off the assembly lines. Industry leaders estimate that by the end of this year there will be 3,000,000 sets produced and that by the end of 1952 there will be sets in 17,000,000 homes -- half of all the homes in the nation.

We were told by some that television was so costly that few advertisers would be able to afford it. Yet today more than a thousand advertisers are using television. Moreover, it is now becoming increasingly evident that because of its effectiveness, television advertising may prove to be the cheapest form of advertising -- cheapest when measured by sales made per advertising dollar invested.

Building a television station is an expensive business. And yet the Federal Communications Commission has far more demands for television channels than it can supply.

Within the next two years there will be one or more television stations in every one of the nation's 140 major market areas. I predict close to 400 stations on the air by the end of 1951.

But these will not be enough to give us the nationwide and competitive system of television that we are aiming for. We need more channels for more stations. We have been working for months with the foremost experts in the matter to resolve the technical problems involved. I am hopeful that we can find the solution in the very near future.

I have been glad of this opportunity to report to you on some of the current problems in the field of communications. Taxation without representation is tyranny but taxation without information is not a good thing either. In our complex society the citizens must necessarily rely on a government agency to protect their interest in a specialized field of this kind. That interest can be protected only to the degree that the agency is equipped technically and professionally to match the industry being regulated, and to the degree that it is guided by policy-makers who have a proper sense of public trusteeship.

I hope that my resume will assist you in evaluating the stewardship of the Federal Communications Commission

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